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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/018,754	12/21/2001	Shizuo Sumida	835.1026	2810

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EXAMINER	
LAU, TUNG S	

ART UNIT	PAPER NUMBER
2863	

DATE MAILED: 10/27/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/018,754	SUMIDA ET AL.	
	Examiner	Art Unit	
	Tung S Lau	2863	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *30 September 2003* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-23* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6,11,16 and 19-23* is/are rejected.

7)☒ Claim(s) *7-10,12-15,17 and 18* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 11, 2, 3, 4, 5, 6, 16, 19, 20, 21, 22 and 23 are rejected under 35 U.S.C. 102(b) as being anticipated by Yamamoto (U.S. Patent 5,594,670).

Regarding claim 1:

Yamamoto discloses a characteristic value identification method comprising a first process for preparing a functional model of a product part based on a potential quantity and a flow quantity representing energy applied to the product part (Col. 2, Lines 6-51), a second process for converting the functional model into a steady functional model in a steady state to identify a steady internal characteristic value (fig. 3, Col. 4-7, Lines 62-52), and a third process for identifying a transient internal characteristic value of the functional model in a transient state by using the steady internal characteristic value (Col. 22-24, Lines 48-4).

Regarding claim 11:

Yamamoto discloses a characteristic value identification apparatus comprising block replacement means for a functional model of a product part prepared by a

potential quantity and a flow quantity representing a strength and a quantity of energy applied to the product part (Col. 2, Lines 6-51), test reproduction means for reproducing at least one steady test model in a steady state of the functional model and at least one transient test model in a transient state (fig. 3, Col. 4-7, Lines 62-52), testing means of the product part for performing a steady test and a transient test respectively corresponding to the steady test model and the transient test model (Col. 22-24, Lines 48-4), measurement means for collecting steady test data and transient test data at a time when a steady test and a transient test of the product part are performed by the testing means (fig. 3, Col. 4-7, Lines 62-52), and calculating means for identifying a steady internal characteristic value of the steady test model by using the steady test data, for applying the steady internal characteristic value to the transient test model to generate transient phenomenon reproduction data (Col. 22-24, Lines 48-4), and for correcting the transient phenomenon reproduction data based on an error between the transient phenomenon reproduction data and the transient test data, thereby identifying a transient internal characteristic value (Col. 22-24, Lines 48-4).

Regarding claim 23:

Yamamoto discloses a character value identification method including preparing a functional model of a product part based on a potential quantity and flow quantity representing energy applied to the product part (Col. 2, Lines 6-51, fig.

1, 2), converting the functional model into a steady state functional model to identify a steady internal characteristic value (fig. 3, Col. 4-7, Lines 62-52), identifying a transient internal characteristic value of the functional model in a transient state by using the steady internal characteristic value (Col. 22-24, Lines 48-4).

Regarding claims 2, 3, 4, 5, 6, 16, 19, 20, 21 and 22:

Yamamoto also disclose:

The characteristic value identification method wherein the second process includes; a first step for determining an internal characteristic value of at least one steady test model from the steady functional model (Col. 2, Lines 6-51), a second step for collecting steady test data by performing a test corresponding to the steady test model (Col. 2, Lines 6-51), and a third step for identifying a steady internal characteristic value of the internal characteristic value based on the steady test data (Col. 2, Lines 6-51) .

The characteristic value identification method wherein the first step determines the internal characteristic value from a government equation in the steady state of the functional model (fig. 3, Col. 4-7, Lines 62-52).

The characteristic value identification method wherein the third step converts the government equation into a recurrence equation to determine the steady internal characteristic value from a recurrence coefficient of the recurrence equation (fig. 3, Col. 4-7, Lines 62-52).

The characteristic value identification method wherein the third step divides the steady internal characteristic value into a known factor and an unknown factor to identify the steady internal characteristic value of the unknown factor (fig. 3, Col. 4-7, Lines 62-52).

The characteristic value identification method includes a first step for determining an internal characteristic value of at least one transient test model in a transient state of the functional model (Col. 2, Lines 6-51), a second step for collecting transient test data by performing a test corresponding to the transient test model (Col. 22-24, Lines 48-4), a third step for applying the steady internal characteristic value to the internal characteristic value of the transient test model to generate transient phenomenon reproduction data (Col. 22-24, Lines 48-4), and a fourth step for correcting the transient phenomenon reproduction data based on an error between the transient phenomenon reproduction data and the transient test data, thereby identifying a transient internal characteristic value (Col. 22-24, Lines 48-4).

A virtual testing system which incorporates a functional model, as a virtual prototype, having an internal characteristic value identified by a characteristic value identification apparatus comprising condition assigning means for assigning a driving operation condition and an environment condition to the characteristic value identification apparatus, observation means for observing reproduction data obtained by the virtual prototype when the driving operation condition and the environment condition are assigned (Col. 2, Lines 6-51, fig. 3),

and evaluation means for evaluating an observation result of the observation means (Col. 2, Lines 6-51, fig. 1).

Claim Objections

2. Claims 7-10, 12-15 and 17-18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all the limitation of the base claim and any intervening claims.

The following is an examiner's statement of reasons for allowance: prior art fail to teach the error does not lie within an allowable range the fourth step repeatedly corrects a predetermined transient internal characteristic value within the transient phenomenon reproduction data until the error lies within the allowable range, and determines the transient internal characteristic value to be identified when the error lies within the allowable range. The use of variance deviation as a time history sensitivity, maximum sensitivity, the evaluation of re-identification machine test data.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Response to Arguments

3. Applicant's arguments with respect to claims 1, 11, 2, 3, 4, 5, 6, 16, 19, 20, 21, 22 and 23 have been considered but are moot in view of the new ground(s) of rejection. However, applicant's arguments filed 9/30/2003 have been fully considered but they are not persuasive.

A. Applicant argues that the prior art does not show the 'a part composing a product', Yamamoto also discloses the 'a part composing a product' in Col. 2, Lines 6-51.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will

the statutory period for reply expire later than SIX MONTHS from the date of this final action.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tung S Lau whose telephone number is 703-305-3309. The examiner can normally be reached on M-F 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow can be reached on 703-308-3126. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-5841 for regular communications and 703-308-5841 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

TC2800 RightFAX Telephone Numbers : TC2800 Official Before-Final RightFAX - (703) 872-9318, TC2800 Official After-Final RightFAX - (703) 872-9319

TC2800 Customer Service RightFAX - (703) 872-9317

TL October 17, 2003

KAMINI SHAH
PRIMARY EXAMINER